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SUBJECT: PERMIT AMENDMENT REVIEW - M/053/005

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DIVISION OF
OIL, GAS & MINING

October 29, 1993

DOGMI
MINERALS PROGRAM
FILE COPY

Mr. Paul Valenti
USMX, Inc.
141 Union Boulevard
Suite 1100
Lakewood, California 80228

RE: Design Agreement on Pad 2E2 and East
Hamburg Makeup Water Pond

Dear Mr. Valenti:

On October 26, 1993, a meeting was held to discuss design requirements for the referenced projects. Messrs. Bob Wilson, Richard Jolk, James Sitner and yourself, representing USMX, Mr. Gene Muller of Steffan, Robertson and Kirsten, and Messrs. Kiran Bhayani, Lyle Stott and myself, representing the Division of Water Quality, attended the meeting.

During our meeting, the following design options and requirements were discussed and agreed upon for design criteria for both the proposed leach pad and pond:

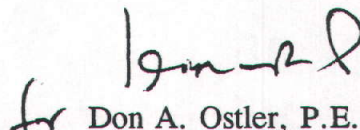
1. The slope of the prepared foundation for heap leach pad 2E2 will be constructed as shown on the revised plans dated 10/93 received on the day of the meeting. The plan shows the average slope measured along the steepest gradient of the total pad length to be 6.277 horizontal to 1 vertical. Performance of the leach pad will be monitored using the leak detection system. Any fluids detected in the leak detection system will constitute failure of the liner system.
2. A 80 mil HDPE protective liner forming a series of panels will be installed on all exposed portions of the pad. Leak detection pipes will be installed between the main synthetic liner and the protective panels.
3. The overall side slope of the heaped ore will be no greater than 2 horizontal to 1 vertical.

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4. Horizontal spacing between the leak detection regions will be no greater than 10 feet wide.
5. All leak detection pipe and leak collection pipe will be 1-1/2 inch in diameter.
6. A 20 mil PVC synthetic liner will be placed under the perforated leak detection pipes.
7. The proposed makeup water pond will be used for makeup water only and will not contain solutions. A gravel packed leak detection pipe will be installed under the pond.
8. USMX will develop a QA/QC plan specifically for installation of leak collection lines and the compaction of clay material around and over the collection lines. The plan will specifically address care to prevent damage to the pipe lines.
9. USMX has committed to develop a plan to test the leak collection lines for damage after installation.

If we can be of further assistance, please contact Mr. Lyle W. Stott of my staff.

Sincerely,


for Don A. Ostler, P.E.
Director

DAO:LWS/rvg

cc: Wayne Thomas, Southwest District Health Department
Bill Dawson, Southwest District Health Department
Lowell Braxton, Division of Oil, Gas and Mining
Mr. James Smith - USMX of Utah

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